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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,402	02/08/2002	Klein A. Rodrigues	2002.ALC	4789
35157	7590	07/22/2004		
NATIONAL STARCH AND CHEMICAL COMPANY				EXAMINER
P.O. BOX 6500				ASINOVSKY, OLGA
BRIDGEWATER, NJ 08807-3300				ART UNIT
				PAPER NUMBER
				1711

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/072,402	RODRIGUES ET AL.	
	Examiner Olga Asinovsky	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 June 2004.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 7-13 and 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 7-13 and 15-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21, 23-24, 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Arfaei U.S. Patent 4,960,465.

The rejection is set forth at pages 2-3 of the office action mailed on 03/04/2004 and is incorporated here by reference.

3. Applicant's arguments filed June 3, 2004 have been fully considered but they are not persuasive.

4. Applicants' argument is that the present alcohol ethoxylate in the present claim 24 is formed by the ethoxylation of a fatty acid (page 6 in applicants' arguments), therefore, the repeating unit is the CH<sub>3</sub>-(CH<sub>2</sub>)<sub>n</sub>- as a portion of polymer. Applicants argue that the hydrophobic backbone of the present invention does not have the polyether -(O-R)- repeating unit as taught by Argaei, because Arfaei teaches a different polymer backbone. This argument is not accepted. First, there is no evidence in the present claims that an alcohol ethoxylate is formed by ethoxylation of a fatty acid having repeating group CH<sub>3</sub>-(CH<sub>2</sub>)<sub>n</sub>. Secondly, the polyoxyalkylene in Arfaei is clearly readable as a backbone polymer having a hydrophobic moiety and hydroxyl group positioned at the end of the polymer. A segment -(CH<sub>2</sub>-CH<sub>2</sub>-O)<sub>n</sub>-CH<sub>2</sub>-CH<sub>2</sub>-OH is

readable as alcohol ethoxylate. A grafted side chain includes dimethylaminoethyl (meth)acrylate, column 4, line 17. The graft copolymer in Arfaei is readable in applicants' claims 7, 10, 15, 16, 20-24.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim7-13 and 15-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Arfaei U.S. Patent 4,960,465 or Rodrigues U.S. Patent 6,291,594.

The rejection is set forth at pages 3-4 of the office action mailed on 03/04/2004 and incorporated here by references.

7. Applicant's arguments filed June 3, 2004 have been fully considered but they are not persuasive.

8. Applicant argument is that neither Arfaei nor Rodrigues teach or suggest the graft copolymer of the present invention, because references fail to disclose the backbone polymer of the present invention. The examiner disagrees. Each of the references discloses a backbone polymer such as polyethylene glycol having a repeating unit -(O-R)- and hydroxyl end moiety. This segment is readable in applicants' claims being an alcohol ethoxylate, for the present claim 24, see Rodrigues column 4, line 22. A hydrophobic backbone polymer in the present independent claim 21 is selected under

Markush group. It would have been obvious to one of ordinary skill in the art to select the polyethylene glycol having -(O-CH<sub>2</sub>-CH<sub>2</sub>)<sub>n</sub>- (n-ethoxylation units) as being a backbone moiety and a grafted side chain such as dimethylaminoethyl (meth)acrylate in Arfaei invention or acrylamide or vinyl pyrrolidone in Rodrigues' invention, and, thereby, obtain a graft copolymer in the present invention. The motivation is that it is within the skill of one in the art to consider that a segment -(O-CH<sub>2</sub>-CH<sub>2</sub>)<sub>n</sub>- CH<sub>2</sub>-CH<sub>2</sub>-OH is alcohol ethoxylate that is readable in applicants' claims.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky  
Examiner  
Art Unit 1711

O.A.

O.A.  
July 17, 2004

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700